



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,510	07/08/2003	Minoru Uematsu	4432-0102P	7613
2292	7590	12/09/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			HORWAT, JENNIFER A	
			ART UNIT	PAPER NUMBER
			3737	
DATE MAILED: 12/09/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

88

<b>Office Action Summary</b>	<b>Application No.</b> 10/614,510	<b>Applicant(s)</b> UEMATSU, MINORU	
	<b>Examiner</b> Jennifer Horwat	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/8/03</u> <u>12/5/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statements filed on 7/8/2003 and 12/5/2003 are in compliance with 37 CFR 1.97-1.98 and all references therein have been considered.

### ***Claim Interpretation***

3. Claims 1 and 20 appear to be attempting to invoke 35 U.S.C. 112, sixth paragraph due to the use of means plus functional language, but do not meet the requirements of the three-prong test due to the recitation of sufficient structure and acts for achieving the specified function. Claims 1 and 20 state that the patient is moved on a "common bed to said specific position" by either linear or curved movements, which is a sufficient act for achieving the specified function.

### ***Claim Objections***

4. Claim 21 is objected to because of the following informalities: "according to claims 20" should be singular "according to claim 20". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu, et al (US 5615430) in view of Oota (US 2002/0039403). Nambu discloses a composite irradiation system comprising a CT-scanner, irradiation apparatus, and x-ray simulator (col 7, lines 36-64) that use a common bed (figure 10) so that the patient does not have to be moved from bed to bed between imaging systems. The bed is capable of movement in both a linear and curved movements, as shown in figure 9, and may also rotate on a turntable mounted on the floor face (figure 1). The system disclosed by Nambu does not include movement of the CT-scanner, irradiation apparatus, or x-ray simulator. However, Oota discloses a system for interventional radiology-computed tomography apparatus (IVR-CT), which also consists of a CT-scanner, an irradiation apparatus, and an x-ray device, in which the CT and x-ray systems are moveable on rails on both the floor and the ceiling (figure 1). Oota teaches a variety of movements of the systems which cross each other, as seen in the movements along axes A and H, move in the same direction, as seen in the movements along axes A and I, and curvedly moving, as seen in the movements along axes B and E. In addition, the direction of movement of the bed crosses the direction of movement of both systems as it moves

along axis C, which is perpendicular to axes A and I. The bed is additionally adjustable both vertically and laterally, along axes C and D, for appropriate positioning of the patient. It is an obvious modification to apply the movements taught by Oota to the three systems disclosed by Nambu. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Nambu with the teachings of Oota in order to allow the combined system disclosed by Nambu to be more compact and therefore take up less space in the examination room.

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu and Oota as applied to claim 1 above, and further in view of Liu, et al ("Cone-beam reconstruction for a c-arm CT system", 2001 IEEE). Nambu and Oota, as discussed above, substantially disclose the invention, as claimed, and for those limitations not previously discussed additionally disclose positional adjustment means for moving the patient in the lateral direction, along axis D, for positioning within the CT scanner (Oota, figure 1). However, neither Nambu nor Oota disclose the dimensions of the CT scanner used. Liu discloses a CT system intended for a medical interventional procedures that has a field-of-view, or detectable region, of 200mm (page 1489). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosures of Nambu and Oota with the disclosure of Liu, as Liu states the system provides "flexibility of use in an operating room" (page 1489).

8. Claims 20-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu and Oota and further in view of Bartels, et al (US 6845258). Nambu and Oota, as discussed above, substantially disclose the invention, as claimed, but fail to

disclose separate beds for each system with a common bed placed on the upper surface of each bed for use in each system. Bartels teaches a number of medical and/or treatment devices in which a common bed (figure 1, element 9) is placed on the bed of each system (figure 1, elements 19, 21, and 23) that allows the bed to be moved linearly through the systems as disclosed by Oota and previously discussed. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the patient support with the teachings of Bartels, as Bartels states this bed allows "universal employability, the patient bed is fashioned such that it can be coupled to each of the patient support mechanisms" (col 3), which would be advantageous as the patient can be brought on the bed to the combined system from a remote location without being transferred to the common bed previously disclosed.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu, Oota, and Bartels as applied to claim 20 above, and further in view of Liu, et al ("Cone-beam reconstruction for a c-arm CT system", 2001 IEEE). Nambu, Oota, and Bartels, as discussed above, substantially disclose the invention, as claimed, however fail to disclose the dimensions of the CT scanner used. Liu discloses a CT system intended for a medical interventional procedures that has a field-of-view, or detectable region, of 200mm (page 1489). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosures of Nambu, Oota, and Bartels with the disclosure of Liu, as Liu states the system provides "flexibility of use in an operating room" (page 1489).

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Meyer, Hajaj, and Bachus teach devices of note.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Horwat whose telephone number is (571) 272-2811. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jah  
12/1/05

Brian Casler  
B. Casler  
SPE 3737